

## CLAIMS

1. An information recording apparatus which irradiates a laser light on a recording medium and forms recording marks  
5 corresponding to recording data, comprising:

a light source which emits the laser light;

a recording waveform generating unit which generates a recording pulse waveform varying between a first level and a second level based on the recording data; and

10 a recording unit which drives the light source based on the recording pulse waveform to form the recording marks on the recording medium,

wherein the recording waveform generating unit adjusts an edge position of a pulse portion having the second level in  
15 the recording pulse waveform in accordance with the first level.

2. The information recording apparatus according to claim 1, wherein the recording waveform generating unit comprises:

a level determining unit which determines the first level;  
20 and

an adjustment unit which compares the first level with a predetermined reference level and adjusts the edge position based on a comparison result.

25 3. The information recording apparatus according to claim 2, wherein the adjustment unit shifts a front edge of the pulse portion backward when the first level is higher than the reference level, and shifts the front edge of the pulse portion forward when the first level is lower than the reference level.

30 4. The information recording apparatus according to claim 1, wherein the recording pulse waveform comprises a top pulse, and wherein the recording waveform generating unit adjusts a front edge position of the top pulse.

5. The information recording apparatus according to claim 4, wherein the recording pulse waveform further comprises one or more multi-pulse, and wherein the recording waveform generating unit adjusts a front edge position of each multi-pulse.

6. The information recording apparatus according to claim 1, wherein the recording waveform generating unit adjusts the edge position of the pulse portion to vary a pulse width of the pulse portion.

7. The information recording apparatus according to claim 1,

wherein the recording pulse waveform comprises one top pulse and one or more multi-pulse, and

wherein the recording waveform generating unit adjusts the front edge position of the top pulse in accordance with a level in a period before the top pulse, and adjusts each front edge position of the plural multi-pulses in accordance with the level between the plural multi-pulses.

8. An information recording method executed in an information recording apparatus which irradiates a laser light on a recording medium to form recording marks according to recording data, comprising:

a recording waveform generating process which generates a recording pulse waveform varying between a first level and a second level based on the recording data; and

a recording process which drives a light source based on the recording pulse waveform to form the recording marks on the recording medium,

wherein the recording waveform generating process adjusts an edge position of a pulse portion having the second level in the recording pulse waveform in accordance with the first level.